17/Appeal Brief 11-03 NP

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

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In the Application of	John S. Cunningham, et al.,
Serial Number:	09/460,197
Filed:	December 13, 1999
For:	Multiple and Hybrid Graphics Display Types
Examiner:	Kevin M. Nguyen
Art Unit:	2674
Attorney Docket Number:	A65-25311
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APPELLANTS' APPEAL BRIEF

To: Mail Stop Appeal Brief-Patents
Commissioner of Patents
PO Box 1450
Alexandria, VA 22313-1450

Honorable Assistant Commissioner for Patents:

As provided in 37 C.F.R. § 1.192, Appellant files this Appeal Brief in triplicate in connection with the above-identified application with the Board of Patent Appeals and Interferences ("Board").

The requisite government fees provided for in 37 C.F.R. § 1.17(c) for a large entity in the amount of $320.00 for filing this Appeal Brief are hereby enclosed herewith in check numbered 7440, and the Commissioner is hereby authorized by this paper to charge any additional fees to Deposit Account Number 01-2335 for Dennis F. Armijo, P.C., and any overpayments should be credited to Account Number 01-2335.

(1) Real Party in Interest

The real party in interest is Honeywell International, Inc.

(2) Related Appeals and Interferences

No other appeals or interferences will directly affect, be directly affected by, or have a bearing on the Board's decision in this appeal.

(3) Status of Claims

Claims 33-36, 38-46, and 48-52 are pending in the present application and have been finally rejected and are the basis for this appeal. The appealed claims are attached as appendix A. Claims 1-32 were withdrawn by the Examiner pursuant to a restriction requirement in Paper 5. Claims 37 and 47 were canceled in Applicant's amendment and response to the office action, filed on August 28, 2002.

(4) Status of Amendments

All of the amendments propounded by the Applicant have been entered including the amendment after final.

(5) Summary of the Invention

The invention, as presently claimed, is a method and apparatus for driving multiple displays of different types, specifically raster displays, stroke displays and hybrid displays (a combination of stroke and raster displays) using a single display routine, and to dynamically switch between displays in real time. The invention dynamically switches the information to be displayed between the selected displays.

To assist in deciding the issues, a brief summary of the proceedings are hereby presented. The original patent application was filed with the Office on December 13, 1999, with 52 claims. An office action was issued on January 23, 2002, containing a restriction and/or election requirement. An election was made by the applicants on February 5, 2002, electing claims 33-52. A non-final office action was mailed by the Office on May 8, 2002, objecting to certain informalities and rejecting all of the pending claims based primarily on a prior art reference to Tomiyasu (US 5,138,305). On September 3, 2002, a response to the office action was timely filed by amending the claims to specifically indicate the type of displays that were not contained in the cited reference. Another office action was issued by the Office on November 27, 2002, again rejecting all of the pending claims. Another amendment was filed by the Applicants on March 19, 2003, whereby the feature of a "single display routine" was added to the claims and fully supported in the specification. A final office action was issued by the Office on May 5, 2003, indicating that Stoddard (US 3,665,454) contained a "single display generator" feature that the Examiner apparently deemed similar to a "single display routine". Thereafter, a response after final, within two months of the office action, was timely filed on July 1, 2003. The Applicants argued that a single display routine was not the same or equivalent to a single display generator. The Examiner in his advisory action dated July 14, 2003, apparently came up with a new reason for rejection, and stated "Stoddard, et al., teach driving a plurality of displays of different types with communication buses or data

flow paths are illustrated as single lines (see column 2, lines 42-43)" and indicated that the claims continued to be rejected. From this, the Applicants appeal.

(6) Issues

I

A SINGLE DISPLAY GENERATOR OR A COMMUNICATION BUS OR DATA FLOW PATH ILLUSTRATED AS SINGLE LINES IS NOT SIMILAR OR EQUIVALENT TO THE CLAIMED FEATURE OF A SINGLE DISPLAY ROUTINE

II

THE EXAMINER ERRED IN HOLDING THAT IT WOULD HAVE BEEN OBVIOUS TO A PERSON OF ORDINARY SKILL IN THE ART AT THE TIME OF THE INVENTION TO UTILIZE THE SINGLE DISPLAY ROUTINE TAUGHT BY STODDARD, ET AL., IN GROTHE, ET AL'S., DISPLAY DEVICE

III

THE EXAMINER ERRED IN HOLDING THAT IT WOULD HAVE BEEN OBVIOUS TO A PERSON OF ORDINARY SKILL IN THE ART AT THE TIME OF THE INVENTION TO UTILIZE THE SINGLE DISPLAY ROUTINE TAUGHT BY STODDARD, ET AL., IN TOMIYASU, ET AL'S., DISPLAY DEVICE

(7) Grouping of Claims

The claims at issue stand or fall together.

(8) Arguments

35 U.S.C. § 103(a) rejections

A. Claims 38-42 were rejected under 35 USC § 103(a) as being unpatentable over Grothe, et al., in view of Stoddard, et al. It should be noted that the 35 USC § 102 (b) rejections in the previous office actions had been overcome in subsequent amendments and are therefore not addressed in the brief. In the last response filed (March 19, 2003), the applicants argued that the invention requires only a "single display routine" to drive the displays of different types. As argued in the several responses to the office actions, there are three different types of displays, stroke displays, raster displays, and hybrid displays (a combination of stroke and raster displays). Grothe, et al., is a perfect example of the prior art for driving the different display types. Each display type requires a specific input format designed for each display type. Stoddard, et al., describes plural display indicators driven by a single display generator (Col.1, lines 64-66). This display generator is in reference to a single **stroke** graphics generator driving a single display or multiple displays at different drawing rates (emphasis added). "A significant advantage of the FIG. 1 embodiment is that the display indicators D1 and D2 can time share the display generator 13 so as to present common or unique sets of symbols and/or video images on both indicators for simultaneous visual observation." (Col. 4, lines 49-54). Again this is in reference to two or more stroke displays and/or two or more stroke drawing rates. Stoddard, et al., discloses using only one type of graphics generation - stroke drawn graphics. There is no mention of raster generated graphics and/or using a single display routine to render graphics in either stroke or raster on the same display. The only remotely close inference to other display types is at Col. 4 lines 50-54 that indicates: "Though illustrated with a cursive writing technique, the variable rate character generator technique is equally applicable to raster scan, dot generating and other writing techniques." This passage does not indicate how this can be done, whether other signal generators are necessary nor does it

mention a combined stroke/raster format or using the identical single display routine to generate the same formats in either stroke or raster mode.

The phrase that "Stoddard teaches driving a plurality of displays of different types with communication busses or data flow paths are illustrated as single lines (see col. 2, lines 42-43)" is in reference to drawing graphics in stroke and does not reference raster generated graphics on the same display.

The Examiner in the final office action indicated that Stoddard teaches a "single display generator", thus rejecting the independent claim (claim 38) for this set of rejections. The rejection was traversed. The error in the rejection is that a display routine is not the same or even closely related to a display generator. The only common feature between a "single display generator" and a "single display routine" are the words "single" and "display". A "single display routine" is not the same as a "single display generator" in the context of the Stoddard, et al., patent or in any context. As specifically set out in the response to the office action dated February 25, 2003, a "single display generator" provides a common means for rendering display objects while the "single display routine" provides a means for defining the display objects to be rendered. A display generator is the same element as the one or more display interfaces from the output of the video library as set out on page 4, lines 8-13 of the patent application. The feature and operation of the single display routine is set out on page 9, lines 1-12. The single display routine could be used with the single display generator of Stoddard as well as other display interfaces. Stoddard discussed a hardware generator while the present patent application teaches a software routine that interfaces with the hardware generator(s). The "single display routine" is a software functional interface that may use one or more "single display generators". The "single display generator" as defined in the Stoddard patent is a specific hardware solution for rendering displays while the "single display routine" as defined in the present patent application is a software functional interface not limited to any one specific hardware solution. The Examiner's simplistic

statement that a "single display generator" is similar to a "single display routine" is totally without merit. If the Examiner's rejections are based on a "single display generator" being an equivalent of a "single display routine", he again is in error.

In the advisory action dated July 14, 2003, the Examiner maintained his rejection and stated: "continuation of 5 does NOT place the application in condition for allowance because: Stoddard, et al., teaches driving a plurality of displays of different types with communication busses or data flow path are illustrated as single lines (see column 2, lines 42-43)". Again, this passage and features are totally different than a "single display routine". The only similar word between the cited prior art passage and the claim language in the present patent application is the word "single". A data flow path is a conduit for data. This data can be a multitude of items; however, Stoddard, et al., fails to describe what these items are, let alone specifically defining them as a "single display routine". It is unimaginable how the Examiner made this leap of first indicating that a display generator is described or implied as a single display routine and then the same leap by holding that a single data path is similar or by implication, the same as single display routine.

It is apparent that Stoddard, et al., does not mention or infer a type of a display routine and specifically does not disclose a single display routine as taught and claimed in the present invention. Therefore, the next analysis requires the applicant to show that the Examiner's conclusion that a single signal generator or a single data path line is not an equivalent to the claimed feature of a single display routine. Although this appears obvious from the above discussion, the analysis is provided below.

In order to rely on equivalence as a rationale supporting an obviousness rejection, the equivalency must be recognized in the prior art, and cannot be based on applicant's disclosure or the mere fact that the components at issue are functional or mechanical equivalents. In re Ruff, 256 F.2d 590, 118 USPQ 340

(CCPA 1958) (The mere fact that components are claimed as members of a Markush group cannot be relied upon to establish the equivalency of these components. However, an applicant's expressed recognition of an art-recognized or obvious equivalent may be used to refute an argument that such equivalency does not exist.); In re Scott, 323 F.2d 1016, 139 USPQ 297 (CCPA 1963) (Claims were drawn to a hollow fiberglass shaft for archery and a process for the production thereof where the shaft differed from the prior art in the use of a paper tube as the core of the shaft as compared with the light wood or hardened foamed resin core of the prior art. The Board found the claimed invention would have been obvious, reasoning that the prior art foam core is the functional and mechanical equivalent of the claimed paper core. The court reversed, holding that components which are functionally or mechanically equivalent are not necessarily obvious in view of one another, and in this case, the use of a light wood or hardened foam resin core does not fairly suggest the use of a paper core). In the present patent application, the Applicant did not indicate that the features presented by the Examiner were functional or mechanical equivalents, nor could they be because the hardware features shown by the Examiner are distinctly different from the claimed software feature.

Further in anticipation of the Examiner indicating that the gist of the single display generator or single data path accomplished the same purpose as a single display routine, the following is provided. Distilling an invention down to the "gist" or "thrust" of an invention disregards the requirement of analyzing the subject matter "as a whole." W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984) (restricting consideration of the claims to a 10% per second rate of stretching of unsintered PTFE and disregarding other limitations resulted in treating claims as though they read differently than allowed); Bausch & Lomb v. Barnes-Hind/Hydrocurve, Inc., 796 F.2d 443, 447-49, 230 USPQ 416, 419-20 (Fed. Cir. 1986), cert. denied, 484 U.S. 823 (1987) (District court focused on the "concept of forming ridgeless depressions having smooth rounded edges using a laser

beam to vaporize the material, "but" disregarded express limitations that the product be an ophthalmic lens formed of a transparent cross-linked polymer and that the laser marks be surrounded by a smooth surface of unsublimated polymer."). See also Jones v. Hardy, 727 F.2d 1524, 1530, 220 USPQ 1021, 1026 (Fed. Cir. 1984) ("treating the advantage as the invention disregards statutory requirement that the invention be viewed 'as a whole' "); Panduit Corp. v. Dennison Mfg. Co., 810 F.2d 1561, 1 USPQ2d 1593 (Fed. Cir.), cert. denied, 481 U.S. 1052 (1987) (district court improperly distilled claims down to a one word solution to a problem). See MPEP 2144.06.

The Examiner in his rejection stated "it would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the single display routine taught by Stoddard, et al., in Grothe, et al's., display device because it would save space, room, and light weight for the applicable display device". The Examiner failed to provide any documentary evidence to support his conclusion. Official notice without documentary evidence to support an examiner's conclusion is permissible only in some circumstances. While "official notice" may be relied on, these circumstances should be rare when an application is under final rejection or action under 37 CFR 1.113. Official notice unsupported by documentary evidence should only be taken by the examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known. As noted by the court in In re Ahlert, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970), the notice of facts beyond the record which may be taken by the examiner must be "capable of such instant and unquestionable demonstration as to defy dispute" (citing In re Knapp Monarch Co., 296 F.2d 230, 132 USPQ 6 (CCPA 1961)). The Examiner, in the present patent application has failed to meet this burden.

It would not be appropriate for the examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well known are

not capable of instant and unquestionable demonstration as being well-known. For example, assertions of technical facts in the areas of esoteric technology or specific knowledge of the prior art must always be supported by citation to some reference work recognized as standard in the pertinent art. In re Ahlert, 424 F.2d at 1091, 165 USPQ at 420-21. See also In re Grose, 592 F.2d 1161, 1167-68, 201 USPQ 57, 63 (CCPA 1979) ("[W]hen the PTO seeks to rely upon a chemical theory, in establishing a prima facie case of obviousness, it must provide evidentiary support for the existence and meaning of that theory."); In re Eynde, 480 F.2d 1364, 1370, 178 USPQ 470, 474 (CCPA 1973) ("[W]e reject the notion that judicial or administrative notice may be taken of the state of the art. The facts constituting the state of the art are normally subject to the possibility of rational disagreement among reasonable men and are not amenable to the taking of such notice.").

It is never appropriate to rely solely on "common knowledge" in the art without evidentiary support in the record, as the principal evidence upon which a rejection was based. Zurko, 258 F.3d at 1385, 59 USPQ2d at 1697 ("[T]he Board cannot simply reach conclusions based on its own understanding or experience or on its assessment of what would be basic knowledge or common sense. Rather, the Board must point to some concrete evidence in the record in support of these findings."). While the court explained that, "as an administrative tribunal the Board clearly has expertise in the subject matter over which it exercises jurisdiction," it made clear that such "expertise may provide sufficient support for conclusions [only] as to peripheral issues." Id. at 1385-86, 59 USPQ2d at 1697. As the court held in Zurko, an assessment of basic knowledge and common sense that is not based on any evidence in the record lacks substantial evidence support. Id. at 1385, 59 USPQ2d at 1697. See also In re Lee, 277 F.3d 1338, 1344-45, 61 USPQ2d 1430, 1434-35 (Fed. Cir. 2002) (In reversing the Board's decision, the court stated " 'common knowledge and common sense' on which the Board relied in rejecting Lee's application are not the specialized knowledge and expertise contemplated by the Administrative

Procedure Act. Conclusory statements such as those here provided do not fulfill the agency's obligation. The board cannot rely on conclusory statements when dealing with particular combinations of prior art and specific claims, but must set forth the rationale on which it relies."). See MPEP 2144.03.

The Examiner's conclusion was challenged in the February 25, 2003, response indicating that Grothe requires separate formats for stroke, raster, and hybrid displays unlike the present invention which requires a single input to be displayed for any of the display types. To adequately traverse such a finding, an applicant must specifically point out the supposed errors in the examiner's action, which would include stating why the noticed fact is not considered to be common knowledge or well-known in the art. See 37 CFR 1.111(b). See also Chevenard, 139 F.2d at 713, 60 USPQ at 241 ("[I]n the absence of any demand by appellant for the examiner to produce authority for his statement, we will not consider this contention."). A general allegation that the claims define a patentable invention without any reference to the examiner's assertion of official notice would be inadequate. If applicant adequately traverses the examiner's assertion of official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained. See 37 CFR 1.104(c)(2). See also Zurko, 258 F.3d at 1386, 59 USPQ2d at 1697 ("[T]he Board [or examiner] must point to some concrete evidence in the record in support of these findings" to satisfy the substantial evidence test). If the examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. See 37 CFR 1.104(d)(2).

B. Claims 33-36 and 43-46 were rejected under 35 USC §103 (a) as being unpatentable over Tomiyasu, et al., in view of Stoddard, et al. Tomiyasu, et al., by the Examiner's own admission is specifically limited to driving a multiple of raster based displays. See office action dated November 27,

2002, page 4. Stoddard, et al., has been extensively discussed above and is also limited to raster based displays. Again, the independent claims (claims 38, 43, and 48) for this set of rejections, each contain the feature of a "single display routine". As previously argued, a display routine is not the same as a display generator or a single data path. Therefore, the Applicants reassert their arguments regarding the similarity and/or equivalence of the stated features argued by the Examiner to be similar or equivalent to a single display routine.

The Examiner in his rejection stated "it would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the single display routine taught by Stoddard, et al., in Tomiyasu, et al's., display device because it would save space, room, and light weight for the applicable display device". The Examiner failed to provide any documentary evidence to support his conclusion. The Applicants reassert their arguments for this issue as set forth above for the similar conclusion made by the Examiner for the combination of Stoddard, et al., in Grothe, et al's., display device.

Conclusion

The "single display generator" as defined in the Stoddard patent is a specific hardware solution for rendering displays while the "single display routine" as defined in the present patent application is a software functional interface not limited to any one specific hardware solution. In addition, a single data flow path is not even remotely similar to the claimed element of a single display routine.

In view of the foregoing, Applicants respectfully request that the Board of Patent Appeals and Interferences overrule the Final Rejection of Claims 33-36, 38-46 and 48-52 over the cited art, and hold that Appellants' Claims are allowable over the references.

(9) Appendix

As previously indicated, an Appendix containing a copy of the claims involved in this appeal is attached as Appendix A.

Respectfully submitted,

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APPENDIX A

to Appeal Brief of Appellants

CLAIMS

CLAIMS

33. (Previously Amended) A computer device for driving multiple displays of different types using formats designed for raster displays, said device comprising:

means for linking generated code from said formats to a standard graphics library;

means for driving a plurality of displays of different types with a single display routine, said plurality of displays comprising stroke displays, raster displays and hybrid displays, wherein said hybrid displays comprise stroke and raster displays, from output of said graphics library; and

means for dynamically switching between said displays in real time.

34. The device of Claim 33, wherein said graphics library comprises an OpenGL graphics library.

35. (Previously Amended) The device of Claim 33, wherein said formats comprise generated code formats.

36. The device of Claim 33, wherein said driving means comprise stroke video drivers using occlusion memory.

37. (Canceled)

38. (Previously Amended) A computer device for driving a hybrid stroke/raster display using formats designed for raster displays, said device comprising:

means for linking generated code from said formats to a standard graphics library;

driving said hybrid stroke and raster display with a single display routine; and

means for providing stroke and raster display inputs from output of said graphics library.

39. The device of Claim 38, wherein said graphics library comprises an OpenGL graphics library.

40. The device of Claim 38 further comprising stroke video drivers using occlusion memory.

41. The device of Claim 38 further comprising means for dynamically switching between stroke and raster video drivers in real time.

42. (Previously Amended) The device of Claim 38, wherein said formats comprise generated code formats.

43. (Previously Amended) A method for driving multiple displays of different types using formats designed for raster displays, the method comprising the steps of:

linking generated code from the formats to a standard graphics library;

driving a plurality of displays of different types with a single display routine, the plurality of displays comprising stroke displays, raster displays and hybrid displays, wherein the hybrid displays comprise stroke and raster displays, from output of the graphics library; and

dynamically switching between the displays in real time.

44. The method of Claim 43, wherein the linking step comprises linking to an OpenGL graphics library.

45. (Previously Amended) The method of Claim 43, wherein the linking step comprises linking generated code.

46. The method of Claim 43, wherein the driving step comprises employing stroke video drivers using occlusion memory rather than raster masking.

47. (Canceled)

48. (Previously Amended) A method for driving a hybrid stroke/raster display using formats designed for raster displays, the method comprising the steps of:

linking generated code from the formats to a standard graphics library;

driving the hybrid stroke and raster display with a single display routine; and

providing stroke and raster display inputs from output of the graphics library.

49. The method of Claim 48, wherein the linking step comprises linking to an OpenGL graphics library.

50. The method of Claim 48 further comprising the step of providing stroke video drivers using occlusion memory.

51. The method of Claim 48 further comprising the step of dynamically switching between stroke and raster video drivers in real time.

52. (Previously Amended) The method of Claim 51, wherein the linking step comprises linking generated code.